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ABSTRACT

The paper asserts that learning disabilities is a "cherished ailment" in that so little is definitively known about the condition or about effective treatment, and further, that school systems and practitioners benefit from the large numbers of students diagnosed as LD. It is suggested that the traditional view of LD precludes alternative explanations. Research is reviewed and research needs are noted for the following topics related to LD: definitions, incidence, typical diagnostic measures and their interpretation and misinterpretation, and common treatment or remediation. The need for more direct and prolonged contact between researchers and students is stressed, as is the need to move from fragmented teaching and testing to a more integrated approach. (CL)

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LD: The Cherished Ailment

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I. Introduction

Flanders Dunbar (1947) coined the term "cherished ailment" in one of her pioneering works in psychosomatic medicine and it characterizes much of the research and practices in the field of learning disabilities. According to Webster's Ninth Collegiate Dictionary cherished means "to hold dear; to keep or cultivate with care and affection; to entertain or harbor in the mind deeply and resolutely. . ." Since 1962 when Samuel Kirk coined the term learning disabilities for the ACLD, researchers and practitioners in many fields at all levels have "cherished" the ailments included in the term learning disabilities. How else can we explain why after all of these years of study, discussion and practice, we still cannot produce a standard definition of LD; we cannot say how many people have LD, nor what type they might have; we do not have a standard battery of diagnostic tools to identify LD cases; we still do largely useless research which is often unused or inappropriate; we still do not have remedial programs that produce success and cures.

Dunbar says that the patient who cherishes an ailment does so because it is a means of avoiding an evil he regards as worse than the ailment or problem; others embrace a symptom or group of symptoms because it brings love and attention. This explains to some extent why some parents and students cling to the label LD -- it protects both parties in some ways since most professionals agree that most LD cases have normal or above normal IQ's but fall below expectancy in their school performance. Not a bad nor insidious ailment.

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Who needs the problems associated with LD? The school districts certainly benefit financially and in terms of additional staff. Teachers, specialists and clinicians benefit from a large population to work with, especially a population that has an incurable ailment. One can massage the LD student instructionally and not be held accountable for significant progress -- it can't be expected. The parents benefit to the extent that they can say their child has normal or above normal IQ but has this special problem that outstanding persons like Churchill, Rodin, Einstein, etc., have had. It is a "good" problem. Professionals in psychology, neurology, pediatrics, optometry, etc., have all been involved in the diagnosis and treatment of LD students.

With all these 'significant others' needing and cultivating the problem, the student often finds it useful to go along in order to avoid a worse evil such as being called a 'dummy' or 'lazy', etc. Also, being labelled LD certainly brings attention, sympathy and affection to the student. This is an ailment worth cultivating and 'holding dear' for many persons.

The professionals have been caught in the web of 'conventional wisdom' regarding the diagnosis and treatment of LD. Many researchers and practitioners do what they are doing because it is the accepted and common way to do things; little or no questioning is going on in Schools of Education or in the public schools so that the conventional procedures are now habitual. This type of behavior is common in other professions as well and with the same deleterious effects. Thomas Kuhn, the well-known economist, has said that a paradigm cannot be displaced by evidence, only by another paradigm. In LD, and in education generally, we too are entrapped by a model or a paradigm that has gained popularity. It precludes other models or variants and has become the conventional wisdom. Questions are shaped by the paradigm and so are the answers; alternatives are

not much valued nor pursued since they bring no gain to the pursuers.

LD is such a paradigm - vaguely medical, neurological and genetic - rooted in the work of Huey, Orton, Delacato, Myklebust, Rourke, Galabruda, Geschwind among others. The dynamics in the field of LD are identical to those described by Kuttner in the February, 1985 Atlantic on "The Poverty of Economics" in which he says: "Thus economic orthodoxy is reinforced by ideology, by the sociologists of the profession, by the politics of who gets published or promoted and whose research gets funded." Very similar to the situation in LD research and practice; LD has become the dominant interest of numerous professionals in the past two decades taking on this mystical-magical-medical air to legitmize it. Yet, as will be seen, the field of LD is a morass of unscientific and ineffective research and treatment. The respected and conservative Albert J. Harris (1980) says of LD:

"At present the field of learning disabilities is full of conflict. Disagreements arise about the correct definition, the role of various professions in diagnosis and treatment, and the kinds of treatment that are appropriate."

The most direct effect of a paradigm or model in any field of study is that it restricts, narrows the realm of inquiry and thus rewards and reinforces conformity. For example, two areas of concern that have been almost totally ignored in LD research and practice are the affect teachers have on students suspected of and finally labelled LD and the affects of the curriculum on the student. These are left out for several reasons: first, the model or paradigm basically says that LD is a dysfunction of the brain and nervous system and has little or nothing to do with teachers or curriculum; second, it is difficult to measure the cognitive and affective influences of teachers on students and the affects of curriculum on students. There are too many variables that cannot be controlled for study, so we study what we can control. Most social science

research conveniently leaves out those variables it either cannot completely identify or control. Neat, but inaccurate and misleading.

I shall present some of the most pertinent research on several aspects of LD including: its definition or lack thereof; its incidence; typical diagnostic measures and their interpretation and misinterpretation; common treatment or remediation programs. The research I present is available to all students, teachers, specialists and clinicians, yet it is apparent from most common practice that the research is not being read, or is not being understood, or is being ignored out of hand since it does not fit comfortably into the model, the paradigm -- the conventional wisdom. Also, it threatens the cherished ailment of LD.

II. Definition

For 25 years many different professionals in education, medicine and psychology have been studying LD and they have not yet produced a satisfactory standard definition of LD. Senf (1977) said: "There is another impediment to the orderly accumulation of knowledge involving both researchers and practitioners: the definition of those termed learning disabled." Yet the research goes on and the labelling goes on apparently in inverse relationship to our understanding. Here are some of the findings and views of leading LD researchers:

(Y sseldike, Algozzine and Epps, 1982) "A variety of definitions of "learning disability" currently are in use. The numbers and types of individuals identified vary greatly as function of the particular definition used."
(Mirkin, Marston and Deno, 1982) "Research has shown that even in school districts employing very specific definitions, students who do not meet the definition are declared to be learning disabled by decision-making teams."

Many other reliable researchers reporting their studies in the Journal of Learning Disabilities in the past five or six years, are not being read, are not being understood, or are being deliberately ignored because their findings do not

fit into the paradigm -- the "conventional wisdom." Reger (1979) says:

"Ultimately the term LD has to be defined in a certain context. It is not a discrete category. What is called LD in one context is viewed a different way in another context. . . This is not necessarily due to actual differences in the children but due to attitudes, expectations, curriculum, professional sophistication, parental involvement, funding and service availabilities, and even to differences among behaviors of such persons as school psychologists."

A long time researcher in LD, William Cruickshank (1983):

"It is too diffuse a term, and permits too many problems in children to be included within it to the end that (in groups) problems of such diverse complexity make realistic teaching nearly impossible."

Samuels (1973) strikes a mortal blow:

"By identifying the problem, giving it a name, and putting the students into a diagnostic category, many educators and psychologists delude themselves into believing that they have gained insight into the causes of the problem. If we ask, "Why is the student failing in reading?" we often get the answer, "He is unable to learn because he has a learning disorder." This answer tells us nothing about the actual sources of the difficulty the students are experiencing. In fact, the answer implies circular reasoning since it is largely because of the presence of academic retardation that the label is ascribed."

This type of circular reasoning and rush to labelling he mentions is compounded by the all too common practice of some neurologists who report that although the child has no neurological deficit or problems he probably has LD or dyslexia anyway. Such <u>non sequiturs</u> are so common in the field that is astonishing that they have not been exposed by more researchers and practitioners.

Smith and Polloway (1979) say:

"Inherent in the term learning disabilities is the concept of individual differences and hence, specific educational needs. . . We are attempting to fashion a label and a category out of a composite of individual children. By doing so, we run into built-in problems stemming from the great degree of intra-individual variation, the substantial latitude of within-group differences, as well as general overlap with other categories of mildly handicapped children. . .Society must move away from the idea that any child who does not meet the criteria for at least average achievement must have a <u>problem</u> image affixed to his school behavior. . .".

Obviously our ability to say precisely what LD is and is not, and how many symptoms one needs to qualify as an LD person and to what extent one needs any or

all of the symptoms, is less than minimal.

The extensive study of Kirk and Elkins (1975) of 3000 children enrolled in Child Service Demonstration Centers (CSDC) in 21 states reported that ". . .most of the children are general underachievers to a moderate degree in reading, spelling and arithmetic. . . one can raise the question of whether such underachievement constitutes a specific learning disability."

Louise Bates Ames (1983) refers to this study by Kirk and Elkins and adds: "Any child who is a general underachiever is certainly in trouble in school. However, this label is not only incorrect but harmful for thousands of children in our schools labelled learning disabled."

In an article called "LD Experts Speak Out", Shepherd (1983) says:

"Learning disability is a concept for which we do not yet have a valid theoretical/empirical explanation. Consequently, it is impossible to devise reliable means for differentiating all children who might be called learning disabled from children who present similar symptoms for different reasons. Furthermore, the term doesn't have unique implications for treatment or prognosis."

Steve Lily of the University of Illinois (1983) says:

"Learning disability is currently . . . a <u>category of services</u> rather than a category of children. It means different things in different places and stringency of definition depends more on availability of resources to serve children than on a philosophical committment to a given definition of learning disability."

Patricia Gillespie-Silver of the University of Massachusetts at Amherst (1983) says: "How can we identify "the symptoms" that separate children? Our tests are too primitive."

Because the term LD is too inclusive, too vague and too 'cherished' by all parties involved, it is clear that the incidence of LD is impossible to ascertain with any precision. This imprecision obviously makes identification and instruction inaccurate and inappropriate in most cases. In the matter of

identification or labelling of prospective students as LD or not LD, Ysseldike and Algozzine (1983) report:

"Very many non-handicapped students are being declared eligible for special education services. When we provided decision makers with test information about students, and when all data indicated normal test performance, more than half of the decision makers declared the normal students eligible for special education services. . .

. . .Given profiles of scores on psychometric measures, we found that psychologists and special education teachers were able to differentiate between low-achieving students and students labelled learning disabled with only 50% accuracy. Naive judges, who had never more than an introductory course in education or psychology, evidenced a 75% hit rate."

Along the same line and revealing again how poorly we define and classify students suspected of having a learning disability, Algozzine, Salvia and Ysseldike (1984) reported very recently:

". . .when individual assessment data were used to compare 50 LD students with a group of low-achieving peers, the overlap in their performance averaged better than 95%; put another way, LD students and low achievers' tests performance scores were similar enough to characterize the students as "psychometric twins with different mothers."

Perhaps that is enough of a sample of research on definitions of LD to support my contention that 25 years of study and discussion have brought us no closer to a standard definition of LD, nor a clear understanding of it. Due to that abysmal failure we cannot decide how much of the population has LD and we cannot do the type of research we need to identify and instruct those labelled LD.

III. Incidence

In as survey of "experts," completed in 1981, and reported in Journal of Learning Disabilities in January of 1983, what some indicated is the incidence of LD:

James E. Ysseldike (University of Minnesota) - 1%

Lee Wiederholt (University of Texas) - 3%

Ronald Cantwell (Cantwell Pediatric Achievement Center, Miami, FLA) - 20-24%

Gerald Geman (College of Optometry, Fullerton, CA) - 33 1/3%

In a light note on this issue Joe Jenkins of the University of Washington says: "As great as the funds are available to serve low achievers."

And Tom Lovitt of the University of Washington says: ". . . [.5 to 50%] depending on the school."

James McKinney (1984) says that it is not possible to account. . .

". . .for the substantial heterogeneity within samples of LD children which are drawn under the definition used in PL. 94-142 . . .It has become evident that the field can no longer tolerate the extent of misclassification that seems to exist today. At present, students who are classified as LD represent one fourth of the handicapped children who are served by special educators nationally. According to the General Accounting Office (GAO) 12 states have classified 40% of their handicapped children as LD, and the figure exceeds 50% in 6 states."

Reger (1979) says:

"The literature contains many estimates of the numbers of learning disabled children. These figures range from small percentages up to thirty percent or more. Nobody seems to know how the figures are derived; apparently they pop out of the heads of experts."

A survey of experts over the past 10 years or so suggests that most agree that about 3-4% of the population has something resembling the poorly defined LD. Because the criteria used for determining LD vary from city to city, often from school to school in larger school districts, it is impossible to make any kind of valid estimate of the incidence of LD. In April, 1985 a commission of 10 members reported to Mayor Koch of New York City on its extensive study of the identification placement of special education students that:

A large portion of the 116,000 students receiving special education to not need it.

. . .far too many children are labelled handicapped when that is not their problem at all.

. . .the board's special education placement process is inefficient!

. . . a student may undergo nine tests to find out whether he has a single handicap -- like using a CAT scan for a splinter."

This was reported in the New York Post of April 26, 1985.

Additionally, this inability to define with precision has caused immeasurable confusion and shoddiness of research in the field. Clearly, it is next to impossible to study and research what you cannot define and delimit in a standard fashion. Yet the research flows on, at least half of which is contradicting the other half. None of this appears to diminish the fervor with which most educators and other professionals persist in mislabelling, miscounting and misteaching.

IV. Research Problems

The inability to precisely define LD prompted objective researchers such as Johnson and Johnson(1978) to say:

"First, the term learning disabilities means many things to many people. Some equate LD with minimal brain dysfunction (MBD) or with hyperactive behavior, while others relate the term to specific behaviors such as uncoordination, reversals in reading, and/or mirror images in writing. Therefore, any research population may be very different from another and its constitutent members may be more different than alike. It follows then, that one must be careful not to generalize from the results of studies with mixed groups."

Harris and Sipay (1980) add:

"The practice of lumping a varied population under one label should not mask the marked individual differences within the population. Especially for research, the practice of comparing a group of learning disability cases with a group of normally achieving children -- an all too common research procedure -- does little to advance the understanding of school failure."

Torgesen and Dice (1980) studied 8 major education and psychological journals between 1976 and 1978 for research on LD or disabled readers. They found,

among other things, that 64% of the researchers used the definition of LD as "expected grade level" but determined in many different ways. They go on to say that:

"Although the heterogeneity of samples of LD childrer. is widely acknowledged, it is apparent . . . that researchers are currently not designing their experiments in ways that are responsive to this fact. Studies continue to be performed that attempt to isolate one or two variables that may underly the learning problems of a broadly defined group of LD children."

Berler and Ro[illegible]czyk(1980) studied 7 different journals in psychology and education from 1972-1978 in terms of how LD was being researched and they found:

"The procedures used most frequently to select each of the populations was to choose those children who previously had been labelled either by educators or mental health professionals."

This is clearly what is meant by a self-fulfilling prophecy. Such circular reasoning in the face of the overwhelming research that says we cannot define LD, that the populations are heterogenous, and that the schools use different criteria from each other in the process of identifying LD students, casts a pall over the research. Torgesen and Dice (1980) conclude their study by saying that:

"Thus, a fairly high proportion of the recent research on LD's has employed measurements that have questionable validity, and only a few investigators appear to be concerned about establishing the validity of their measures."

I have cited the fascinating and revealing study by Ysseldike and Algozzine relative to how poorly experts using diagnostic test data on children could identify LD students from non-LD students; it is no wonder at all.

Norman and Zigmond (1980) talk about the widespread use of the concept of "expectancy" as the key factor in determining who shall be labelled LD and they point out that expectancy formulas:

". . .may not be appropriate, it may simply be that a large percentage in LD programs are not significantly underachieving, since in some centers these students account for as many as 70% of the populations labelled LD,

it would be important to determine why they are being served."

Ceci and Eglea (1981):

"The problem with generalizing from this research is its lack of comparability. . . the most serious problem concerns the non-comparability of the subjects labelled LD."

Not unexpectedly one problem overflows into many related areas. Our inability to define LD makes it impossible to determine how many peopld have LD and what type or sub-types exist; it makes valid research almost impossible and that affects how we diagnose LD students, how we teach them, and how we evaluate progress.

In place of precise definition we get a list of characteristics or traits, but we do not know how many traits one needs to exhibit before being labelled LD, and much more importantly, we do not know how much of each trait one must exhibit in order to qualify for the title LD. We may be worse off than we were 25 years ago when poor readers were called poor readers and we taught them; now many of them are called LD and they have become permanent academic cripples. In addition, most LD specialists are not reading specialists even though it is reading failure that is the most common presenting problem.

Let's look at what research says about testing and diagnosis to determine who has LD and who does not have it.

V. Testing and Diagnosis

The research on the validity and reliability of tests used in a typical core evaluation of suspected LD cases, revealed that most of the tests are very seriously flawed. Many of the commonly used tests lack reliability, validity, and proper standardization including: the Illinois Test of Psycholinguistic Abilities (ITPA), Peabody Picture Vocabulary Test (PPVT),

Developmental Test of Visual Perception (DTVP), Slossen Intelligence, Visual Motor Integration (VMI), Bender-Gestalt, Detroit, Wepman, Benton Visual Retention, among other recently researched.

Ysseldike, et. al., (1981) sum up the situation in testing and assessment:

"We need a new perspective on assessment; administering standardized tests to confirm teacher observation is wasteful, administering standardized tests to plan instructional programs is ineffective, and administering standardized tests to evaluate educational progress is failing.

Guthrie and Seifert, (1975) report:

"The tests used to differentiate strengths and weaknesses in poor learners are inadequate for that purpose. First, the measures are often standardized on inappropriate populations. The Peabody Picture Vocabulary Test (PPVT) was standardized on 4000 white middle class children around Nashville, Tennessee. The Slossen Intelligence Test was standardized on children from gifted, normal, and retarded classes, and adults from professional groups and county jails, many of whom had neurologic disorders. For other tests, such as the Gates-McKillop Diagnostic Reading Test, it is not known on whom the tests were standardized."

Campbell, (1979) says:

"In the past, diagnostic workups have often been inadequate and poorly focussed relying too heavily on test scores without thorough evaluation of the child in his or her environmental context. The identification of skill deficit masquerading as diagnosis cannot lead to reasoned clinical decisions about appropriate treatment strategies."

In addition to problems with the size and representativeness of standardization populations, critical factors which are essential to the use of such instruments, many of these tests are also invalid and unreliable. Perhaps the ITPA is the classic example of an instrument with all three problems that is still used by many practitioners as part of their assessment of suspected LD cases.

Smith and Marx (1972) noted that the ITPA correlated fairly well with the WISC, r=.63 then query: "Are we then to consider psycholinguistic abilities as facets of intelligence or of language development? What is the ITPA adding to our knowledge about the child if it is, in effect, largely a measure of verbal

intelligence, other than perhaps new names for old subtests of intelligence?" They go on to say that some of the sub-tests may not measure what they say they measure, e.g., "Auditory Reception may demand organizing rather than receptive processes; Visual Reception involves both memory and conceptual thinking and may be verbal as well as visual. . ." And they conclude: "The groupings suggested by the authors or the use of the profile for diagnosis of areas of deficit are hardly supported by the relationships among the tests indicated by the factor analysis."

Carroll's review of the ITPA in the Buros' Seventh Mental Measurements Yearbook (1972) agrees with Smith and Marx but goes even further in questioning the limited standardization population, (about 1600 students in Decatur, Illinois), the excessive testing time, the complexity of administering the battery, and even whether the test is a measure of psycholinguistic abilities since only about half of the tests involve the use of language. He also found that there was no pattern of high or low scores that are characteristic of children with reading disabilities.

Spache (1976) concludes his analysis and discussion of the ITPA:

"The relationships with reading achievement of the various ITPA subtests are certainly not anywhere as consistent as the WISC patterns. Nor is there yet strong evidence of the predictive value of the battery in attempting to estimate potential for reading performance. Most of the subtests are affected by socioeconomic status, as we would expect for an instrument standardized on a population drawn from various levels of the middle class."

Newcomer and Hammill (1975) found that the diagnostic validity of the ITPA in discriminating between groups of good and poor readers was completely negative for all subtests when intelligence was controlled.

Clearly, many researchers find the ITPA to be all but useless for diagnostic work, particularly for populations different from the very small and relatively homogenous population used to standardize this collection of loosely defined

subtests. An ironic sidelight may characterize the ambiguity in much diagnostic work, and that is Spache (1981) still suggests the use of some of the subtests in spite of all this contrary research data. In short, he knows what is wrong with this ITPA, yet recommends the use of some of its components. How can practitioners in the field respond to such reasoning?

Porter and Binder (1981) studied visual motor tests and concluded:

"The Visual Motor Intelligence (VMI) and the Bender Gestalt Test (BGT) are theoretically related. Practically, however, the VMI and the BGT display only limited practical inter-test reliability. . . the VMI and the BGT, although sharing some common variance, also measure different constructs in reference to the assessment of the child's level of visual-motor development."

This speaks to earlier remarks about the incomparability of many of the tests we use in diagnosing reading and language problems. These two visual-motor tests actually measure different aspects and qualities of visual-motor development and skill. We just learned that the ITPA subtests appear to be measuring several things other than what the authors think they are measuring. How is it possible to draw any valid conclusions from such tests when used individually or in combination with each other? It is neither clear what they are measuring and how it relates to learning to read and to use language effectively.

Ceci, et. al, (1981) thoroughly investigated a variety of memory tests and report:

"Numerous correlational studies of well-known memory tests (e.g., Detroit, G-F-W, WISC-R span, ITPA Visual sequential memory, MFD, Benton Visual Retention, Wepman) have shown very low intercorrelations between them suggesting that the cognitive skills being tapped by these instruments are not identical."

Hammill and Wiederholt (1973) and Larsen and Hammill (1974) did a review of the massive correlational research on several aspects of visual perception:

"It was concluded that neither the total score nor the sub-test scores of the DTVP relate meaningful to reading."

Ceci (1981) quoting other researchers and expressing his and his collaborators' views states:

"There is growing disillusionment with the practice of diagnosing and remediating LD children on the basis of the standard LD battery which includes the use of standardized tests in the assessment of the child's intelligence, memory, language, auditory discrimination, psychomotor skills, and neurological integrity." (Coles, 1978) The reasons for this disillusionment are many, including the questionable statistical characteristics of many commonly used instruments (Arter and Jenkins, 1978) The poor quality of programming information these instruments yield for the LD specialist (Myers and Hammill, 1976) and the recent discovery that the present means of assessing specific strengths and weaknesses are either inadequate or unimportant in remediating school-related difficulties" (Arter and Jenkins, 1978).

Coles (1978) adds:

"With respect to diagnosis, the state of knowledge suggests that the diagnostic judgements of a learning disabilities specialist are caught up in evidential and logical weaknesses from which they cannot be extricated without considerable qualification."

On the issue of the validity of many of the measures used to identify LD children, Bryan (1974) says:

". . .it has not yet been confirmed that learning disabled children differ from normal children when using the most commonly identified measures. . . children identified as learning disabled do not show marked differences in visual processing, auditory processing, level of activity, signs of neurological deficit, or cross-modal integration. The learning disabilities stereotype simply does not hold up under empirical investigation. Thus little evidence exists that the category of learning disabilities does represent a distinctive population."

As we have seen in the discussion on testing and diagnosis many tests attempt to fragment reading and language learning for easier measurement and simpler correction. This approach is sometimes called the basic factors approach to diagnosis and teaching. Guthrie and Seifert (1978) cite shortcomings of the basic factors approach which, incidentally, is part of the conventional wisdom today.

"It is possible that the advocates of basic factors were unable to resist the temptationof correlated deficiency. Because children who cannot read also have an inadequate memory for a sequence of geometric forms, they should be trained to remember geometric forms. It seems likely that a <u>non sequitur</u>

so flagrant would have given rise to a massive educational movement, but is is possible."

Research on the relationships between the visual perception of geometric forms and ability to read has revealed time and again that there is no significant relationship. Myklebust cites the studies of Guthrie, Goldberg, and Finucci (1972) and Kolers (1975) on this issue:

"Tests of the two show low correlations, and many cognitive operations - such as perception of redundancy and pronunciation, which are required for word recognition - are absent in abstract pattern perception."

Guthrie and Seifert (1978) discuss the false assumption that the basic factors being measured are independent. Carroll (1972) agrees that the factors measured by such tests as the ITPA are not independent at all. To clarify that significant point they add:

". . .visual perception is a process required for reading or at least word recognition. And visual perception is also a process required to remember a sequence of geometric forms. . . However, the two sets of processes -- those needed to perceive words and those needed to perceive geometric forms -- are different."

Using good tests for improper purposes or misinterpreting the results of such instruments is common practice in many of the instances cited above, but the WISC-R has not been mentioned. THE WISC-R I think holds a special place among diagnostic tools and many LD specialists and psychologists have tried to manipulate its data for their own purposes. In an unusually careful and thorough analysis of the test used in the diagnosis of LD students Des Jardins (1981) says:

"The WISC-R, although used extensively by psychologists with the learning disabled, has some serious shortcomings when used with this population. . . The amount of specific interpretation that can be made of each subtest is slight, yet subtest strengths and weaknesses are often simplistically recommended as the basis for educational remediation."

And:

". . . although the predictive validity is generally high with the WISC-R, it misses when it predicts academic success in the learning disabled."

All of this research on the numerous flaws in so many of the commonly used tests used in identifying LD students, persuasive as it is, has not altered the conventional wisdom or the common practice in the field. In addition the research has said almost nothing about the fact that reading tests, for example, measure many different skills and knowledge in their various subtests. Some time ago I went through the vocabulary subtests of the Iowa, Stanford, California, and Metropolitan Reading tests and found that the tests measured different numbers of words; measured these words differently -- that is, some measured the word meanings in a phrase, some in a fill-in sentence format; and although the tests I analysed were all for grades 3-5, only one word was common to all of the tests. Does it matter whether we test word knowledge with 25, 30, 40, or 50 different words? Does it matter whether we measure this knowledge in phrases or in fill-in sentences, or in isolation, etc.? Does it matter that many students will take two or three or even four Reading tests and that the vocabulary subtests measure different words in different ways? Of course it matters! Yet these variations are not taken into consideration in the diagnosis. Why? Who selects which test results to accept? Which to ignore? How do we come up with a conclusion of LD based on such incomparable and contradictory test results?

So much for testing, diagnosis, and decision-making relative to students suspected of having and finally being labelled LD. These disastrous practices have been going on now for about 25 years with no end in sight. This may be the most cherished of all cherished ailments in eduation.

VI. Remediation

What are we doing to solve this cluster of reading, language and learning

problems subsumed under the label of learning disabilities? For the moment let us, like good readers of fiction, suspend our disbelief about the definitions of LD that do not define nor qualify the incidence of the problem which ranges from 2-30% of the population, about the many invalid, unreliable and inadequately standardized tests used in the diagnosis of LD, and let us turn to some of the typical, conventional remedial programs designed to cure or at least remediate LD.

Obviously there have been many types of training and remediation tried over the years including: psycholinguistic training, visual-perceptual training, vision training, physical training as with Kephart boards and the Delacato creeping, crawling and positioning activities, also drugs and even diets to deal with LD. What has research and clinical experience shown us? What works, what doesn't?

Hammill and Larsen (1974) concluded that psycholinguistic training was not validated; Myers and Hammill (1976) reviewed 31 studies of the Frostig-Horne program and found that 68% of the results were negative and in a similare study Hammill and Bartel (1975) concluded that the value of perceptual-motor training has not been sufficiently demonstrated to justify the expenditure of school funds or teacher time.

A review of sixty studies on the value of visual-perceptual training in relation to reading, arithmetic, and spelling revealed that the relationships are not significant enough to be useful to teachers (Colarusso and Martin and Harting, 1975; Larsen and Hammill, 1975). Silver (1983) assessed the value of Ayres' sensory integrative therapy including postural reactions, oculomotor muscle control, poor visual orientation, distractibility, etc., and found that there is no convincing evidence that the mastery of such postural skills

carries over into reading.

Keogh (1974) reviewed many studies on the value of vision training and concluded that due to confusion within the literature cross-study comparisons were difficult. Johnson and Johnson (1978) concluded that:

". . .while the diagnostic-prescriptive approach is favored among special education teachers, especially those concerned with learning disabilities, there is little empirical evidence to support the validity of the concept."

As has been noted, the basic factors approach to testing and teaching LD students is still quite popular. It emphasizes and analyzes individual skills, strengths and weaknesses in both testing and teaching. The ITPA's breakdown of specific sub-skills is a good example of this type of approach both for the diagnostic and remedial functions. Guthrie and Seifert (1978) conclude:

"From this we may conclude that a program of training specific abilities based on the ITPA tests would rest on fairly shaky ground. In other words, if these basic factors exist, they cannot be measured precisely enough and are not sufficiently independent as a basis for separate activities in an educational program."

Flax (1972) reported the results of several medical associations' discussions relative to LD and visual problems and visual training and says:

". . .there is no evidence that either visual training (e.g., muscle exercising) or neurological organization training (e.g., laterality, balance board, or perceptual training) is warranted."

George and Cynthia Hynd (1984) say:

"other 'new' remedial approaches offered for dyslexics are nothing but a rehash of techniques and practices long since proven worthless."

I would certainly add that any remediation that exposes any student to further evidence of his weaknessess and failures - more of the same- in reading and language skills is worse than worthless; it is destructive.

Once again I must ask why do we pursue testing and teaching practices as

well as research practices that have been proven inappropriate, ineffective and extremely wasteful economically and educationally? Someone must be benefiting from this process of labelling and teaching LD students all over the country. What is our responsibility as professionals in this matter? Why do so many of us cherish this set of ailments?

Summary and Conclusions

Enough research evidence has been presented to support the conslusion that our inability to define precisely, test appropriately, interpret conflicting test data rationally, to group and instruct successfully, constitutes one of the greatest educational failures of the past 25 years -- perhaps the whole century. We cling to a conventional wisdom that is constantly contradicted and rejected by much significant current research and practice. The orthodoxy of the conventional wisdom has prevented many professionals from seeking alternative causes and cures for language problems. We certainly are resolute and harbor the various misconceptions of LD deeply in our minds; in short we cherish this ailment.

Once clear message from all of this research and the often shoddy practice it measures and observes, is that the researchers need more direct and prolonged contact with teachers and students and the teachers and specialists need more understanding of valid research.

Some think they have discovered a new frontier in the study of the brain, neuroanatomy and neurophysiology.

Those who have tried to make minute analyses of brain function or dysfunction

as a major cause of dyslexia or LD, need to be aware of the facts about the holistic functioning of the brain. Restak (1984) in speaking of the research on specialization within the brain says:

". . .the left hemisphere is generally concerned with language and verbal reasoning, while the right hemisphere is more involved with spatial perceptions and emotions. But none of these rules is etched in granite. In fact, the number of exceptions is prompting neuroscientists to reevaluate their preconceptions about what goes on in the brain."

And he adds:

". . .considerable disagreement exists among neuroscientists on whether it will ever be possible to equate a 'disordered thought' with a 'disordered molecule'."

Others in neuroscience have known for some time about the importance of meaning and context in brain functioning. Teyler (1973) et. al., have shown that evoked brain potentials are different when the subject is presented with the word rock, depending on whether this word is used to mean a stone, a type of music, or a rocking chair. Teyler, et. al., (1973) say:

". . .different averaged evoked waveshapes are elicited when the same spoken or printed word is embedded in syntactical content as a verb or a noun. . ."

Myklebust (1978) stresses throughout his studies, "meaning is the dominant feature in language learning."

Pribram (1979), one of the world's leading neuroscientists, points out a startling fact: ". . .2% of the fibers in a particular system would retain that system's functioning."

All of this, and much more, could be made of the role of meaning in language learning and failure. Meaning means relationships of letters, sounds, combinations, words, phrases, ideas, concepts ---- CONTEXT. Because this is true, it is clear why so much of our diagnosis and treatment of reading and language disabled students of all ages are being misdiagnosed and mistaught.

One cannot measure the scores of skills, understandings, feelings that occur in each nanno second of the act of reading, writing, communication. We cannot separate the factors as the research has shown, and we cannot cure reading and language problems letter by letter, sound by sound, skill by skill.

Piaget, Bruner, Chomsky, Lenneberg, Restak, McLuhan, Lorenz, Vernon, Pribram, among others, agree that the brain, learning and language, are integrated wholes, not collections of fragments, parts and pieces, letters, sounds, etc.

Because practitioners have ignored, not read, or not understood a good deal of the valid research, and because many of the researchers are unfamiliar with classrooms, a gap exists and the students suffer from our cherished ailment. The conventional wisdom, like so much orthodoxy is brittle, so that even though it has been shown to be inappropriate, ineffective it will not change. It has not changed very much in the past 25 years insofar as testing and teaching are concerned. Many of the same tests and most of the same remedial instruction is applied to those labelled LD, in spite of the research and practice that reveal its weaknesses.

We can do better and there are more effective ways of assessing student weaknesses and strengths in language learning and usage and there are some successful instructional alternatives that do not require students to know and do what they have already demonstrated they do not know and cannot do. We must get away from fragmented testing and teaching; we must develop the sense of wholeness of each individual student and of the language learning process.

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